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The nest, eggs and nestlings of Fulvous Antshrike *Frederickena fulva* from north-east Ecuador

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Originally described as a subspecies of Undulated Antshrike *Frederickena unduligera* by Zimmer (1944), Fulvous Antshrike *F. fulva* was recently elevated to species rank, based largely on vocalisations (Isler *et al.* 2009, Remsen *et al.* 2011). Thus, in all but the most modern treatments, the taxon discussed here was referred to as Undulated Antshrike (e.g., Hilty & Brown 1986, Ridgely & Greenfield 2001, Zimmer & Isler 2003). Fulvous Antshrike, as currently defined, is monotypic and occurs in the lowlands of westernmost Amazonia from southern Colombia to northern Peru (Zimmer & Isler 2003). Here we provide the first data on the reproductive biology of this poorly known species based on a nest in the foothills of eastern Ecuador.

Methods and Results

We found a nest of Fulvous Antshrike on 16 June 2011 at the reserve administered by the Proyecto de Conservación del Río Bigal, Fundación Ecológica Sumac Muyu (600 m), near Loreto (00°38'S, 77°19'W), prov. Napo. The nest contained two eggs when discovered, but we took no further data at this time. When we returned on 30 June, at 16.00 h, one egg had hatched. The nestling inside the second egg was partially visible through a large hole it had opened in the shell, and had fully hatched c.15 minutes later. The hatching egg was still sufficiently intact to accurately measure as being 30.5 × 22.8 mm and 7.9 g. The egg was slightly off-white with copious cinnamon and lavender flecks and narrow scrawls, concentrated at the larger end. The nestling was completely devoid of natal down, with flesh-coloured skin, slightly duskier dorsally. The bill was dark orange, yellower near the tip except for the dorsal portion of the mandible, which was dusky and bore a bright white egg tooth. The rictal flanges were bright yellow and the mouth lining was bright yellow-orange. The nestling weighed 6.5 g and the right tarsus measured 11 mm.

The nest was a large, thin-walled cup, and its contents were partially visible from below. It was attached by the rim, via two sparse 'wings' extending up on opposite sides to two narrow, parallel, horizontal branches (6 and 8 mm diameter). These attachment points extended c.3 cm above the rim and consisted of no more than 15–20 rootlets each. The nest fairly uniformly comprised thin, slightly branched rootlets, crisscrossed and interwoven, with only those circling the slightly thickened rim being coiled. The inner portion had a sparse, poorly defined lining of smooth, un-branched flexible fibres of unknown origin, as well as 4–5 black fungal rhizomorphs. The cup was 10 cm in diameter inside by 7.5 cm deep. Externally the nest was 14 cm wide by 9 cm tall. Photographs of the nest, eggs

and adults are available on the Colaboraciones Americanas Sobre Aves website (<http://avesamericanas.lifedesks.org/pages/103479>).

Sited at the edge of an open gap created by a recently felled tree, adjacent to an area of dense second growth, the nest was 1.6 m above ground in a 2.5 m-tall sapling that had a sparse-leaved vine tangled through it. As the nest was not discovered until after several days of woodcutting, it is difficult to determine how visible the nest would have been under natural conditions. Based on the timing, however, it appears that the nest was constructed after the tree was felled, but before human activity trampled the surrounding vegetation. It was fairly exposed from one side, but fairly hidden from the other and we suspect that it would have been well hidden in the tangle under natural conditions.

Both adults brooded and fed the nestlings, generally flushing from the nest only when we approached closer than 2 m. When approached while brooding, both sexes flared their substantial crests, but otherwise remained motionless until suddenly leaving the nest and moving off through the low, dense foliage. They did not begin alarm-calling until out of sight and 5–10 m away. Invariably the second adult joined that flushed from the nest within 1–10 minutes. Only the female spent the night on the nest. Based on vocalisations heard very close to nightfall, after the female was sitting for the night, it appeared that the male spent the night c.50 m distant. However, we cannot be sure that these vocalisations were not given by another individual. During the three days we observed the nest we were unable to identify any prey items with certainty, but all appeared to be small arthropods (<50% of the adult's bill size), brought to the nest singly.

Discussion

Molecular evidence (Brumfield *et al.* 2007, Moyle *et al.* 2009) places *Frederickena* within a clade containing *Hypoedaleus*, *Batara*, *Mackenziaena*, *Cymbilaimus* and *Taraba*, and suggests that it is most closely allied to *Mackenziaena*, with which it was formerly merged (Cory & Hellmayr 1924). Comparative data concerning the form and placement of nests are generally scarce. Haverschmidt & Mees (1994) described a nest of Black-throated Antshrike *F. viridis* that generally matches that described here, in both form and placement (open basket in fork low in shrub). Nests are undescribed for both species of *Mackenziaena*, for Spot-backed Antshrike *Hypoedaleus guttatus* and for Bamboo Antshrike *Cymbilaimus sanctaemariae*. However, G. M. Kirwan (*in litt.* 2012) informs us that a nest of Tufted Antshrike *M. severa* he found in Bahia, Brazil, in January 2011, was broadly similar to that described here of *F. fulva*. The nest of Giant Antshrike *Batara cinerea* appears similar, but is described as including leaves in its construction, though sample sizes are very low (Ihering 1914, Zimmer & Isler 2003). Perhaps because of the species' large geographical range, the nest of Great Antshrike *Taraba major* has been described by multiple authors (e.g., Skutch 1969, Wetmore 1972, de la Peña 1995). In fact, the nest photographed by Buzzetti & Silva (2008) is virtually indistinguishable from the nest of Fulvous Antshrike we observed. Across its range, however, there appears to be some variation, with nests from southern South America tending to be externally decorated with leaves, lichens or moss (Fraga & Narosky 1995, di Giacomo 2005), and those from Costa Rica and Ecuador containing dead leaves woven into the structure (Skutch 1969, Sheldon & Greeney 2008). Slightly less well known, but still with several descriptions available, are nests of Fasciated Antshrike *Cymbilaimus lineatus*, which share the rim-attached, bulky-cup architecture of other species in this clade (Skutch 1972, Oniki & Willis 1982, Greeney *et al.* 2004, Kirwan 2009). However, *C. lineatus* frequently builds its nests more than several metres above the ground (Oniki & Willis 1982, Kirwan 2009; HFG pers. obs.). Thus, available evidence suggests that general nest architecture is similar within this group (Moyle *et al.* 2009, Remsen *et al.* 2011), with only slight variations in materials.

Eggs of species within this clade are slightly better known: Great Antshrike (Oates & Reid 1903, Smyth 1928, Snethlage 1935, Hellebrekers 1942); Fasciated Antshrike (Skutch 1972, Wetmore 1972); Giant Antshrike (Ihering 1914); Spot-backed Antshrike (Ihering 1900, Oates & Reid 1903); Black-throated Antshrike (Haverschmidt & Mees 1994). Though descriptions vary somewhat, eggs of these species, like those described here, are white to off-white with various combinations of cinnamon and lavender flecking, generally in small, narrow, hair- or scratch-like markings rather than blotches. Nestlings have not been described, with the exception of *Taraba* and *Cymbilaimus*, for any other species, but it comes as no surprise that the nestling of Fulvous Antshrike was born without natal down as is true for all species of *Thamnophilidae* for which data are available (Zimmer & Isler 2003, Collins 2010). It goes without saying that more information is needed for all species in this especially poorly known group of antshrikes.

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References:

- Brumfield, R. T., Tello, J. G., Cheviron, Z. A., Carling, M. D. & Crochet, N. 2007. Phylogenetic conservatism and antiquity of a tropical specialization: army-ant-following in the typical antbirds (*Thamnophilidae*). *Mol. Phyl. & Evol.* 45: 1–13.
- Buzzetti, D. & Silva, S. 2008. *Berços da vida, ninhos de aves brasileiras*. Ed. Terceiro Nome, São Paulo.
- Collins, C. T. 2010. A review of natal pterylosis of passerines: useful information or avian marginalia? *Bull. Brit. Orn. Cl.* 130: 96–101.
- Cory, C. B. & C. E. Hellmayr. 1924. Catalogue of birds of the Americas, pt. 3. *Publ. Field Mus. Nat. Hist., Zool. Ser.* 13(3).
- Fraga, R. & Narosky, S. 1985. *Nidificación de las aves argentinas (Formicariidae a Cinclidae)*. Asociación Orn. Plata, Buenos Aires.
- di Giacomo, A. G. 2005. Aves de la Reserva El Bagual. Pp. 201–465 in di Giacomo, A. G. & Krapovickas, S. F. (eds.) *Historia natural y paisaje de la Reserva El Bagual, Provincia de Formosa, Argentina. Inventario de la fauna de vertebrados y de la flora vascular de un área protegida del Chaco Húmedo*. Aves Argentinas / Asociación Orn. Plata, Buenos Aires.
- Greeney, H. F., Gelis, R. A. & White, R. 2004. Notes on breeding birds from an Ecuadorian lowland forest. *Bull. Brit. Orn. Cl.* 124: 28–37.
- Haverschmidt, F. & Mees, G. F. 1994. *Birds of Suriname*. VACO, Paramaribo.
- Hellebrekers, W. P. J. 1942. Revision of the Penard oölogical collection from Surinam. *Zool. Meded. Leiden* 24: 240–275.
- Hilty, S. L. & Brown, W. L. 1986. *A guide to the birds of Colombia*. Princeton Univ. Press.
- Ihering, H. von. 1900. Catálogo crítico-comparativo dos ninhos e ovos das aves do Brazil. *Rev. Mus. Paulista* 4: 191–300.
- Ihering, H. von. 1914. Novas contribuições para ornitologia do Brazil. *Rev. Mus. Paulista* 9: 411–448.
- Isler, M. L., Isler, P. R., Whitney, B. M., Zimmer, K. J. & Whittaker, A. 2009. Species limits in antbirds (Aves: Passeriformes: *Thamnophilidae*): an evaluation of *Frederickena unduligera* (Undulated Antshrike) based on vocalizations. *Zootaxa* 2305: 61–68.
- Kirwan, G. M. 2009. Notes on the breeding biology and seasonality of some Brazilian birds. *Rev. Bras. Orn.* 17: 121–136.
- Moyle, R. G., Chesser, R. T., Brumfield, R. T., Tello, J. G., Marchese, D. J. & Cracraft, J. 2009. Phylogeny and phylogenetic classification of the antbirds, ovenbirds, woodcreepers, and allies (Aves: Passeriformes: infraorder Furnariides). *Cladistics* 25: 386–405.
- Oates, E. W. & Reid, S. G. 1903. *Catalogue of the collection of birds' eggs in the British Museum (Natural History)*, vol. 3. Trustees of the Brit. Mus. (Nat. Hist.), London.
- Oniki, Y. & Willis, E. O. 1982. Breeding records of birds from Manaus, Brazil: Formicariidae to Pipridae. *Rev. Bras. Biol.* 42: 563–569.
- de la Peña, M. R. 1995. *Ciclo reproductivo de aves argentinas*. Centro de Publicaciones, Univ. Nacional Litoral, Santa Fe.
- Remsen, J. V., Cadena, C. D., Jaramillo, A., Nores, M., Pacheco, J. F., Robbins, M. B., Schulenberg, T. S., Stiles, F. G., Stotz, D. F. & Zimmer, K. J. 2011. A classification of the bird species of South America. www.museum.lsu.edu/~Remsen/SACCBaseline.html (accessed 22 September 2011).

- Ridgely, R. S. & Greenfield, P. J. 2001. *The birds of Ecuador*. Cornell Univ. Press, Ithaca, NY.
- Sheldon, K. S. & Greeney, H. F. 2008. A comparison of parental care of the Great Antshrike (*Taraba major*) in Costa Rica and Ecuador. *Orn. Neotrop.* 19: 293–298.
- Skutch, A. F. 1972. *Studies of tropical American birds*. Publ. Nuttall Orn. Cl. 10. Nuttall Orn. Cl., Cambridge, MA.
- Smyth, C. H. 1928. Descripción de una colección de huevos de aves Argentinas. *Hornero* 4: 125–152.
- Snethlage, E. 1935. Beiträge zur Fortpflanzungsbiologie brasilianischer Vögel. *J. Orn.* 83: 532–562.
- Wetmore, A. 1972. *Birds of the Republic of Panamá*, pt. 3. Smithsonian Institution Press, Washington DC.
- Zimmer, J. T. 1944. Studies of Peruvian birds. XLIX. Notes on *Frederickena* and *Octhoeca*. *Amer. Mus. Novit.* 1263: 1–5.
- Zimmer, K. J. & Isler, M. L. 2003. Family Thamnophilidae (typical antbirds). Pp. 448–681 in del Hoyo J., Elliott, A. & Christie, D. A. (eds.) *Handbook of the birds of the world*, vol. 8. Lynx Edicions, Barcelona.
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On the name of the Canary Blue Tit *Cyanistes teneriffae* from Gran Canaria

by Albrecht Manegold

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In 2008, a new subspecies of Canary Blue Tit, *Cyanistes teneriffae hedwigii* was described from Gran Canaria on the basis of mitochondrial DNA sequence analyses as well as bioacoustic and morphological data, though originally placed in the genus *Parus* (Dietzen *et al.* 2008). The original spelling of the species-group name is incorrect and must be changed in accordance with the *International code of zoological nomenclature* (ICZN 1999, Art. 32.5.1). The epithet ‘*hedwigii*’ is the genitive case of the Latinised *hedwigi*, which is masculine. According to the authors’ etymological explanation, *hedwigi* is derived from the modern German name Hedwig, which usually, however, is a female name. In fact, the new taxon was dedicated to Ms Hedwig Sauer-Gürth (Dietzen *et al.* 2008). Thus, the correct spelling is *Cyanistes teneriffae hedwigae*, because the feminine genitive ending *-ae* is to be added to the stem of this female modern personal name if used as a species-group name (ICZN 1999, Art. 31.1.2; cf. Art. 33.2.2 justified emendation). The epithet *hedwigae* must not be confused with the epithet *hedwigii*, which has been correctly applied for several species of algae, bryophytes and fungi, all of them apparently named for Mr Johannes Hedwig, a German botanist and physician of the 18th century (Mägdefrau 1992).

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References:

- Dietzen, C., Garcia-del-Rey, E., Castro, G. D. & Wink, M. 2008. Phylogeography of the blue tit (*Parus teneriffae*-group) on the Canary Islands based on mitochondrial DNA sequence data and morphometrics. *J. Orn.* 149: 1–12.
- International Commission on Zoological Nomenclature (ICZN). 1999. *International code of zoological nomenclature*. Fourth edn. International Trust for Zoological Nomenclature, London.
- Mägdefrau, K. 1992. *Geschichte der Botanik*. Second edn. Gustav Fischer, Stuttgart.
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